

## *Sensitivity Calculations*

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Sensitivities are used as measures of robustness for engineering systems. In many applications, one is interested about the system performance under small variations of a set of design parameters. In inverse device design, sensitivities guides the search within the space spanned by a set of design parameters.

## *Numerical Differentiation*

*Finite Difference Method*

*Complex Step Method*

*Automatic Differentiation*

*Automatic Forward-Mode Differentiation*

*Automatic Reverse-Mode Differentiation*